

CASE STUDY

Schwarz Group Scales Data and AI Operations Across Europe with Dremio on STACKIT

At a Glance

The Customer



Challenge

Schwarz Group faced the complex challenge of processing several petabytes of daily data and migrating 100,000+ machine learning models while complying with strict European data protection regulations that prevented effective use of traditional cloud providers.

Solution

Schwarz Group established STACKIT, their own European cloud service provider, implementing Dremio's open data lakehouse platform to enable compliant data processing, self-service analytics, and seamless migration of their massive-scale operations while maintaining data

Results

- 100,000+ machine learning models successfully migrated to cloud infrastructure
- Several petabytes of daily data processing capability established
- 70% workload migration target set for 2027 across 32-country operations
- Enhanced data democratization enabling self-service analytics across all departments

The Customer

Schwarz Group stands as Germany's leading retailer, generating approximately 154 billion euros in annual sales across an impressive global footprint. Operating over 13,700 locations in 32 countries through well-known brands like Lidl and Kaufland, the company serves customers through supermarkets, hypermarkets, and discount stores worldwide. With over 500,000 dedicated employees, Schwarz Group has established itself as a retail powerhouse that processes several petabytes of data daily to optimize operations, forecast demand, and deliver exceptional customer experiences at massive scale.

The Challenge

Schwarz Group faced a complex data management challenge that extended far beyond typical enterprise data concerns. The company was generating several petabytes of data daily across its global operations, powered by over 100,000 machine learning models used for demand forecasting, inventory management, and operational optimization. However, strict European data protection regulations, particularly GDPR and evolving privacy frameworks, created significant barriers to leveraging cloud infrastructure effectively.

The regulatory landscape proved particularly challenging, with the invalidation of Safe Harbor in 2015 and Privacy Shield in 2020 creating uncertainty around data transfers. The introduction of Transfer Impact Assessments required extensive evaluation of data movement to non-EU countries, adding complexity and cost to cloud adoption. These regulatory requirements, combined with the need for data sovereignty, meant that traditional cloud providers couldn't fully meet Schwarz Group's requirements for stability, reliability, and legal compliance while maintaining their focus on delivering customer value.

Additionally, the company needed to support both legacy systems requiring migration and modern cloud-native applications, all while enabling self-service data access across departments. The scale of operations demanded massive resource requirements for storage, compute, and network capabilities, while maintaining simplicity and accessibility for employees across the organization.

The Solution

Schwarz Group took an innovative approach by establishing STACKIT, their own cloud service provider, designed to meet European data sovereignty requirements while providing enterprise-scale cloud capabilities. As the foundation of their data and AI strategy, STACKIT implemented a comprehensive lakehouse architecture with Dremio as a core component of their data and AI platform.

Dremio's open data lakehouse platform became instrumental in STACKIT's ability to provide managed services that enable easy data ingestion, processing, and visualization across the organization. The platform's architecture supports the organizational scaling requirements that Schwarz Group demanded, allowing easy attachment of new data providers while maintaining support for large-scale workloads.

The implementation focused on three critical areas where Dremio excelled: seamless data ingestion capabilities that could handle the company's massive daily data volumes, simplified processing that enables quick cluster provisioning for large-scale data analysis, and robust visualization options essential for analytics across the organization. Dremio's self-service analytics capabilities aligned perfectly with Schwarz Group's goal of democratizing data access across all departments while maintaining strict security and compliance standards.

STACKIT's partnership approach with Dremio included extensive pre-sales consulting and collaborative solution development, ensuring the platform could meet the specific requirements of European enterprises while providing the scalability needed for Schwarz Group's global operations.

Results

The implementation of Dremio on STACKIT has delivered transformative results for Schwarz Group's data and AI operations. The company successfully established infrastructure capable of processing several petabytes of data daily while maintaining full compliance with European data protection regulations. This achievement represents a significant milestone in enabling data-driven decision making at unprecedented scale.

The migration of over 100,000 machine learning models to the STACKIT platform, powered by Dremio's capabilities, has enhanced the company's ability to forecast demand and optimize inventory management across their global retail network. Key systems, including the Schwarz Inventory Management system - one of the largest and most modern inventory management systems globally - are successfully operating on the platform.

The unified analytics platform has dramatically reduced management overhead for internal employees, enabling quick and easy provisioning of projects, tools, and environments for data and AI work. This self-service capability has accelerated time-to-insight across the organization while maintaining strict security and compliance standards.

Perhaps most significantly, Schwarz Group has established a replicable model for European data sovereignty, with STACKIT now serving external customers and positioning itself as a European alternative to traditional cloud providers. The success has validated the approach of combining cutting-edge data lakehouse technology with European data protection requirements, creating a foundation for sustainable growth in the evolving regulatory landscape.

ABOUT DREMIO

Dremio is the intelligent lakehouse platform for the business, serving hundreds of global enterprises, including Maersk, Amazon, Regeneron, NetApp, and S&P Global. Based on open-source technologies like Apache Iceberg and Apache Arrow, Dremio provides an open lakehouse architecture enabling the fastest time to insight and platform flexibility at a fraction of the cost.

Learn more at www.dremio.com.

Dremio and the Narwhal logo are registered trademarks or trademarks of Dremio, Inc. in the United States and other countries. Other brand names mentioned herein are for identification purposes only and may be trademarks of their respective holder(s). © 2025 Dremio, Inc. All rights reserved.